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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,589	03/08/2002	Baksa Chi	112147	1089
25944	7590	10/18/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			BHATNAGAR, ANAND P	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,589

Applicant(s)

CHI ET AL.

Examiner

Anand Bhatnagar

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 10, 11, and 16-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ✓ 1) ☒ Notice of References Cited (PTO-892)
- ✓ 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ✓ 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/08/02.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Election/Restrictions***

1. Applicant's election filed on 07/21/05 has been entered and made of record. Applicant argues that claim 13 has been currently amended to be dependent on claim 1 and argues in essence that the search would not be a serious burden on the examiner since the search would encompass both group's subject matter. Claim 13 as amended is not dependent directly from claim 1 but is an independent claim written in dependent form since it now incorporates all the limitations of the method of claim 1. Claim 13, as amended, is still a subcombination to the combination of claims 1 and 14 since there are particulars/features in claim 13 which are not needed in order to perform the combination. Even though, a restriction is present in the claims examiner will withdraw the restriction since the subcombination is only a single claim.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant modifies the inserting of the lead into a hole based on data representing the detected position of the lead but there is no detection of the positions taking place for this process. This makes

Art Unit: 2623

the claim vague and indefinite. Examiner will address this claim as best understood.

Claim 13 recites the limitation "based on data representing the detected position of the lead." There is insufficient antecedent basis for this limitation in the claim. Examiner will address this claim as best understood.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Higashi et al. (U.S. patent 6,738,504).

Regarding claims 1, 13, and 14: Higashi et al. discloses a method of detecting a position of at least one lead of an electric component which additionally includes a body from which said at least one lead extends (fig. 4 elements 10, 14, 16a, 22, 26, and 28 and col. 1 lines 7-10) the method comprising the steps of

illuminating a lengthwise limited portion of the lead, with a light incident thereto in a direction substantially perpendicular to a lengthwise direction of the lead, taking an image of the lead, on a side of a free end of the lead, in a direction parallel to the lengthwise direction of the lead (fig. 1 elements 10, 14, 16a, 22, 26, and 28, col. 1 lines 51-67, col. 2 lines 13, and col. 5 lines 40-67, wherein the leads are illumination by a light source which is substantially perpendicular and the imaging source is perpendicular to the surface of the semiconductor, i.e. parallel to the length wise of the leads, imaging the tips of the leads.), and

detecting the position of the lead by processing image data representing the taken image (col. 2 lines 1-3, wherein the misalignment of the tips "leads" is performed. This misalignment judgment is read as determining the positions of the leads and if the positions of the leads are too close or too far apart from each other).

Regarding claim 2: The method wherein the electric component includes a plurality of leads, and wherein the step of detecting the position of the lead comprises detecting a position of one of the leads relative to a position of the other lead (fig. 4 element 14 and col. 2 lines 1-3, where there are multiple leads being checked for misalignment).

Regarding claim 3: The method wherein the light comprises a planar light which is incident to the lead along a plane substantially perpendicular to the lengthwise direction of the lead (col. 4 lines 33-37).

Regarding claim 4: The method wherein the limited portion of the lead is distant from the free end thereof by a predetermined distance toward a base end thereof (fig. 4 element 14).

Regarding claim 5: The method wherein the limited portion lead consists of the free end thereof and a portion thereof adjacent to the free end (fig. 4 element 14).

Regarding claim 6: The method wherein the step of illuminating the limited portion of the lead comprises illuminating the limited portion of the lead with the light incident thereto in a plurality of directions substantially directed to the lead in a plane substantially perpendicular to the lengthwise direction of the lead (col. 4 lines 19-36).

Regarding claim 7: The method wherein the plurality of directions comprise at least three directions (col. 4 lines 33-37).

Regarding claim 8: The method according to claim 1, wherein the light comprises a laser light (col. 4 lines 37-41, wherein a highly directive lighting can be used and a laser is a highly directive light source).

Regarding claim 9: The method wherein the step of illuminating the limited portion of the lead comprises illuminating the limited portion of the lead of the electric component held by a component holding head, with the light incident thereto, and wherein the step of taking the image of the lead comprises taking the image of the lead of the electric component held by the component holding

head, on the side of the free end of the lead, in the direction parallel to the lengthwise direction of the lead. See claim 1 and col. 6 lines 23-59.

Regarding claim 12: The method according to claim 1, wherein the electric component comprises a connector which includes at least one lead and which is mounted on a circuit substrate such that said at least one lead is inserted in at least one hole formed in the circuit substrate (fig. 4 element 14).

Regarding claim 15: The apparatus further comprising a support member which supports the locally illuminating device and the image taking device (col. 6 lines 23-59).

#### ***Allowable Subject Matter***

4. Claims 10, 11, and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kishimoto et al. (U.S. patent 4,978,224) for a lighting system using a slit/planar method of illumination.

Art Unit: 2623

**Contact Information**

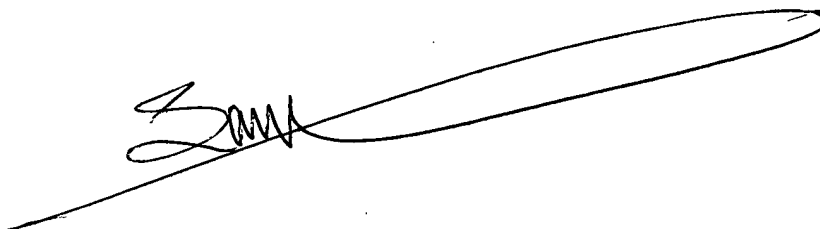
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Jingge Wu whose number is (571) 272-7429, Central fax is 571-273-8300, and Tech center 2600 customer service office number is 703-306-0377.

*AB*

Anand Bhatnagar

Art Unit 2623

October 14, 2005

A handwritten signature in black ink, appearing to read 'Samir', followed by a long, sweeping horizontal line that extends to the right.

**SAMIR AHMED  
PRIMARY EXAMINER**